



THE VEGETARIAN

EATING LIFESTYLE

Vegetarian eating is widespread among athletes these days and it is important for the coach to realize a few of the effects that this eating plan may have on your athletes.

The term vegetarianism is used loosely with many athletes from those who do not eat red meat to those who do not eat any animal products at all. I encounter many athletes who claim to be vegetarian when in fact they are not because they may not fully understand the different classifications associated with vegetarianism. Before we jump too far into the vegetarian way of life, here are some of the more common categories of vegetarian diets:

- **Lacto-vegetarian:** no animal foods except for milk and milk products (yogurt, cheese, cottage cheese)
- **Lacto-ovo-vegetarian:** no animal foods except for eggs, milk and milk products.
- **Vegan:** no animal foods at all.

I have met some athletes who fall into a couple of the different categories, who constantly bounce around from one to another and those who also eat fish but no other meats. It doesn't really matter what type of vegetarian plan an athlete follows whether it be for ethical, moral, health or performance reasons. What is important is how this can effect your athlete's health and performance based on the training load you provide them throughout the year.

EFFECTS OF VEGETARIANISM

Optimal performance comes with good health. Athletes who follow any type of vegetarian eating program seem to have a lower risk of developing diseases such as diabetes and heart disease in later years of life. Unfortunately, much of the scientific research is focused on health effects of vegetarianism and not specifically on performance. However, it is easy to infer that vegetarian eating plans could lead to increased performance since carbohydrates are

plentiful and carbohydrates are the body's main source of energy during moderate to high intensity training.

Of course, there are some challenges when it comes to following a vegetarian eating plan. Protein sources are present but the athlete must make more of a concerted effort to find protein food sources based on what type of vegetarianism they follow. It is easy to find a piece of chicken or glass of milk but when an athlete chooses not to eat those food items or travels internationally where these products may not be available, the hunt for protein is more challenging. Here is a list of non-meat options that you can provide your athletes that will provide a good balance between protein and carbohydrate:

- Soy milk
- Tofu
- Edamame
- Quinoa (a grain that is relatively in protein)
- Walnuts, almonds
- Kidney and black beans
- Tempeh
- Hummus
- Peanut, soynut or almond butter

For athletes thinking of adopting a vegetarian lifestyle, it is easier if you recommend they progress from minimizing animal product consumption to avoiding it altogether over a period of time. I personally believe in following this natural progression for most athletes because it is easier to learn about substitute foods and truly maintain being a vegetarian without completing voiding the diet of animal products in one day. Keep in mind the following dietary concerns as your athlete progresses from being an animal product consumer to a vegetarian since it will almost always have an impact on their performance.

1. **Total energy.** Most vegetarian diets are high in carbohydrate rich foods such as fruits, vegetables and grains and have a lot of fiber which are very filling. This could result in an athlete not eating enough calories to support their training. I have worked

with many vegan athletes who had problems maintaining their weight. Good strategies to ensure they are receiving enough calories to support their energy expenditure include eating nuts, peanut butter, soy products and meat substitutes.

2. Protein. Vegetarian athletes who do not eat any type of meat or dairy foods could have low protein intakes. It is well known that athletes need to eat protein to remain in macronutrient balance but they also require a higher protein level depending on their strength program, level of fitness and demands of their individual sport. Higher non-meat protein foods include nuts, tofu, hummus, soy milk and some whole-grain based cereals.

3. Iron. Vegetarian athletes are at greater risk for having low iron stores because the most absorbable type of iron (heme iron) is only found in animal products. Non-heme iron, found in plant sources, contains iron but in lower amounts and is not as absorbable. Iron is needed to help the muscles get oxygen and low amounts of iron could cause fatigue and poor performance. Female athletes more than males are affected because of the monthly blood loss from menstruation and while it is more common in female endurance athletes, iron deficiency happens in all types of athletes (including males) from strength/power, acrobat/combat, team and endurance sports. Including non-animal sources of iron including spinach, broccoli, almonds, oatmeal and iron fortified cereals will help the athlete maintain their iron stores. Drinking orange juice, or another source of

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vitamin C, with these foods can help the body absorb more iron.

4. Calcium. For those vegetarian athletes who do not drink milk or any dairy foods, calcium will be low. Calcium is very important for healthy bones and also muscle contractions. Alternate sources of calcium rich foods include calcium-fortified cereals, tofu, soy milk and green leafy vegetables.

5. Vitamin B12. There is no active form of this vitamin in any plant foods and because vitamin B12 is involved in the breakdown of foods to energy, low amounts can be detrimental for performance. Pure vegan athletes are at risk of developing anemia from deficiency of this vitamin and this can lead to fatigue. Fortified foods are the top choice to include in an athlete's eating program and include whole grain cereals and soy products.

Athletes who follow any type of vegetarian eating program can still perform at a high level. In order to be successful, athletes must become more educated about plant-based food options and choose many varieties and options of fruits, vegetables, nuts, legumes, soy products and meat alternatives. It will take some planning in the initial stages of adopting a vegetarian lifestyle but it becomes much easier after the athlete gets over the initial learning curve.

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Curried sweet potato quinoa

Serves 4

Ingredients:

1Tbs	Olive oil
1 ea	Sweet potato, diced (skin on)
¼ cup	Onion, diced
1 ea	Granny smith apple, diced
1Tbs	Curry powder
1 cup	Quinoa
2 cups	Vegetable broth
1 cup	Frozen peas
½ cup	Cashews, chopped

Preparation:

1. In a sauce pan, sauté onion and sweet potato in olive oil until onion begins to soften (about 3 minutes).
2. Add apples, curry powder and quinoa. Continue to cook stirring often for 2 minutes.
3. Add broth, cover and bring to a simmer.
4. Cook at a low simmer for 20 minutes.
5. Add frozen peas, cashews. Stir and cook uncovered additional 2 minutes.
6. Remove from heat, cover and let stand for 5 minutes.

Nutrition per serving:

Calories: 375; Total fat: 14g Saturated fat: 2g; Protein: 10g;
Carbohydrates: 54g; Fiber: 8g; Sodium: 450mg

Kitchen Tips:

1. Quinoa is a gluten free grain grown primarily in the Colorado Rockies that was actually known to the Incas as “the mother grain”
2. Quinoa is richer in high quality protein than any other grain. It is rich in the amino acids: lysine, cystine, and methionine as well as niacin, B-6, calcium, magnesium and iron.

Created by: Adam Korzun, MS, RD, LDN



Sweet corn bisque with crispy tofu

Serves 4

Crispy Tofu Ingredients:

1 block	Tofu, drained, pressed and diced
2Tbs	Cornstarch
Salt and pepper and chili powder to taste (about 1 tsp of each)	

Preparation:

1. Preheat oven to 400 F.
2. Season cornstarch with salt and pepper to taste.
3. Toss tofu in seasoned cornstarch until well coated.
4. Arrange tofu on a foil lined, and sprayed baking pan.
5. Bake for 30-40 minutes or until crispy (stirring once)

Sweet corn bisque Ingredients:

1Tbs	Olive oil
1 cup	Onion, diced
2 ea	Red bliss potato, diced (small w/ skin on)
2 cup	Frozen corn, thawed
1 tsp	Garlic, minced
3Tbs	Flour
1Tbs	Thyme (dried or fresh)
4 cup	Vegetable broth (low sodium)
2 cup	Soymilk
Pepper to taste	

Preparation:

1. In a large sauce pan, saute onion and potato in olive oil until onion begins to soften (about 3 minutes).
2. Add corn and garlic and continue to sauté additional 5 minutes.
3. Add thyme and slowly stir in flour until well incorporated (a pseudo roux).
4. Slowly add stock, stir constantly to prevent lumps.
5. Once all stock in added, bring to a simmer and cook until potatoes are soft (about 30 minutes)
6. Remove from heat, and let cool about 5 minutes.
7. Add soy milk to cool, and then puree soup in a blender.
8. Add puree soup back to pan, season with pepper and return to heat.
9. Return soup to simmer and then serve (Portion soup into bowls and top with crispy tofu)

Nutrition per serving:

Calories: 425; Total fat: 16g Saturated fat: 2g; Protein: 28g;
Carbohydrates: 49g; Fiber: 8g; Sodium: 580mg

Kitchen Tips:

1. Tofu is often considered a “super-food” because it is a complete protein; providing all 8 of the essential amino acids. Tofu is available in several textures, ranging from silken to extra firm. The firm is great for baking, grilling or sautéing while the silken can be pureed to make vegan mayo, desserts and even smoothies.
2. The cornstarch will actually draw the water out of the tofu during the baking process and creates a crispy outside crust similar to deep fat frying, but without adding any of the fat!

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